REMARKS

The present amendment is submitted in response to the Office Action dated March 25, 2008, which set a three-month period for response. Filed herewith is a Request for a Two-month Extension of Time, making this amendment due by August 25, 2008.

Claims 1-12 are pending in this application.

In the Office Action, the drawings were objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. The abstract, disclosure and claims were objected to for various informalities. Claims 1-12 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1-5 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,988,958 to Mack. Claims 6 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mack. Claims 8-12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mack in view of U.S. Patent No. 2,874,985 to March.

Turning first to the objection to the drawings, filed herewith is new Fig. 7 showing the removal screw 30, including the outer thread 31 and front side 32. No new matter is added, since the subject mater was disclosed in the application as originally filed.

The abstract and specification have been amended to address the noted objections. In addition, the title of the invention has been amended and a description of new Fig. 7 has been added.

Regarding the objections to and formal rejection of the claims under Section 112, second paragraph, claims 1-12 were amended to address these objections and rejections.

Turning next to the substantive rejection of the claims, claims 1 through 5 were rejected as being anticipated by Mack. The Applicants respectfully disagree. Claim 1 has been amended to more clearly define the invention over this reference.

Claim 1 as amended defines the following unique features of the present invention:

a) ***cutting edges*** are provided,

b) the cutting edges extend in the ***axial*** direction,

c) the axially-extending cutting edges are formed ***on the spindle head*** 131,

d) the cutting edges are located on the ***circumference*** of a spindle head section,

which is recessed relative to the free end of spindle head 131,

e) the cutting edges ***surround*** this spindle head section,

f) when chuck 131 is slid axially onto spindle head 131, the cutting edges cut into the ***circumferential wall of outer section 152.***

This results in a form-fit transfer of torque radially from the inside that acts in the circumferential direction, i.e., from the spindle head section with cutting edges 16, toward the outside to the circumferential wall of outer section 152. In this manner, strong forces and, therefore, torques, between drive spindle 13 and chuck 14 may be transferred in the circumferential direction.

Given that the cutting edges are formed ***on the spindle head,*** in particular on the circumference of the recessed spindle head section, these cutting edges are part of spindle head 131. They may be formed as part of the manufacture of spindle head 131.

No special additional elements are required, such as a tooth lock washer 21 in Mack. The spindle 13, which is provided when cutting edges 16 are manufactured, is therefore ready for installation of chuck 14. Outer section 152 of chuck 14 does not need to be provided with driving elements, e.g., cutting edges, teeth, or the like, on the inner circumferential wall, because, when the chuck is slid axially onto spindle head 131, the axial cutting edges cut into the circumferential wall of outer section 152 in the ***axial direction.*** Chuck 14 may be installed and secured on spindle head 132 quickly, easily, and without the use of any intermediate components (e.g., a toothed ring 12 as in Mack).

Section 10 of the office action refers to Mack and the tooth lock washer noted therein, which is pressed axially between axial shoulders 20 and 27 (column 2, lines 26-28, claim 1, column 4, line 6).

Contrary to the position stated in the Office Action, a tooth lock washer of this type does not include axially-extending cutting edges. Instead of cutting edges of this type, a tooth lock washer has "teeth", which extend upward at an angle away from the disk surface. Nor is it correct to state that axially-extending cutting edges of the type described in Mack (which are not shown) are "formed on the spindle head". Instead, Mack describes that a toothed ring 21 is located between shoulders 20 and 27. Ring 21 is a separate component. It is not "formed on the spindle head".

Given that the tooth lock washer is pressed axially between axial end faces 20, 27, its teeth are pressed into shoulder 20 of chuck 3, and into shoulder 27 of spindle 16. The latter does not apply to the present invention, because the cutting edges are formed on the spindle head and, in accordance with feature d), on the circumference of the recessed spindle head section.

Therefore, amended claim 1 is not anticipated by Mack. In addition, it is also based on an inventive activity relative to Mack, because Mack does not even begin to point in the direction of the special inventive solution. Mack discloses, for example, in column 2, lines 25-26, that a fixed, torque-transferring connection between spindle 16 and chuck 3 is created by screwing threaded section 17 into threaded bore 15 until shoulder 20 bears axially against shoulder 27. It is also expressly emphasized that the shoulders may bear against each other directly, as shown in the example in Figures 1, 2, and 4. The torque-transferring connection between chuck 3 and spindle 16 is attained, as in Mack, via threaded engagement 15, 17 and pressing shoulders 20, 27 together axially. Tooth lock washer 21 (Figure 3) is not required to create a non-rotatable connection of this type, as one skilled in the technical art understands. At most, tooth lock washer 21 serves to provide an additional safeguard that threaded connection 15, 17 will not come loose in the opposite direction.

With the object of the present invention, on the other hand, if axial cutting edges 16 –which cut into the circumferential wall of outer section 152 – are eliminated, a torque-transferring connection between spindle 13 and chuck 14 cannot be established. It is clear that the torque-transferring means – in contrast to threaded

engagement 15, 17 in Mack – is formed by the axial cutting edges and by the fact that these cutting edges cut into the circumferential wall of outer section 152 when the chuck is slid on axially. The torque-transferring connection is established as a result. It is clear that a torque-transferring connection of this type using circumferential teeth 16 is a completely different technical solution than that using threaded connection 15, 17 in Mack with directly abutting shoulders 20, 27 or a tooth lock washer 21 installed therebetween to prevent rotation (Figure 3).

Mack therefore does not anticipate amended claim 1 in particular, nor does it render it obvious in any way.

Original claim 2 is therefore also not anticipated by Mack. It is not correct to state that, with Mack, the axially extending cutting edges "are located on a spindle head section that is recessed from the exposed end of the spindle head", as the Examiner remarks. In Mack, Figure 3, the tooth lock washer is inserted as a further additional component between spindle head 16 and chuck 14, and, in fact, between axial shoulder surfaces 20 and 27, as a loose component.

The features of claim 3 are also not anticipated by Mack. Claim 3 defines the inner diameter of outer section 152, i.e., the diameter of the circumferential wall of this section, as being smaller than the outer diameter of the cutting edges. In other words, the outer diameter of the cutting edges is greater than the inner diameter of the circumferential wall of section 152. These diameters were selected so that, when chuck 14 is slid axially onto spindle head 131, cutting edges 16 may actually cut into the

circumferential wall of section 152 and therefore create a type of circumferential toothing for a torque-transferring connection. This is not the case with Mack.

With regard for the example shown in Figure 1 in Mack, slight radial play between shank 19 and bore 18 is discussed (column 3, line 11). The exact opposite is therefore defined, since the diameter of circumferential wall 18 is not smaller, but rather larger than the outer anticipate claim 3. The same applies for claim 4. It provides that spindle head 131 is hardened with cutting edges 16, or it is made of a harder material than chuck 14.

The Applicants disagree with the Examiner's position that this is the case in Mack, which contains no statements regarding the material out of which spindle head 16 is made. Nor is any information provided in Mack regarding the material of which chuck 3 is made. Given that it is stated in Mack – in column 3, line 24/25 – that toothed ring 21 bites into the chuck and spindle 16, it may be concluded, at best, that spindle head 16 is just as soft or hard as chuck 13, so that 13 and 16 may both be pressed into the tooth lock washer.

Since, with the present invention, cutting edges 16 are formed on spindle head 131, and in fact, on the circumference of a recessed spindle head section, this one-pieced design means that cutting edges 16 do not cut into the spindle head. The cutting edges alone cut into the circumferential wall of outer section 152. The spindle head with cutting edges may therefore be hardened, or it may be made of a harder material than chuck 14. This is not disclosed in Mack, and it is not possible.

The features of claim 5 are also not anticipated by Mack. In this regard as well, the Examiner's argument that the (not present) cutting edges are formed by a groove toothing in Mack that surrounds the spindle head is not correct. Instead, with Mack, according to Figure 3, only tooth lock washer 21 is inserted axially between the two shoulders 20, 27. This is neither a formation of cutting edges in the form of a groove toothing, nor one that "surrounds the spindle head".

Claims 6 through 12 are not anticipated by Mack essentially for the same reasons as stated above.

The formation of a polygonal prism according to claim 6, the corner edges of which form the cutting edges, is very obviously advantageous to one skilled in the technical art, since it is particularly easy and cost-favorable to create a polygonal prism of this type in the spindle head section, which is recessed from the exposed end of spindle head 131.

The Applicants also respectfully disagree with the grounds for rejection of claims 8 through 12. First, it should be noted that the installation and fastening screw 20 described in claim 8 is not absolutely necessary to realize the invention (refer to the last paragraph of the description), since it may be sufficient in terms of installing the chuck to press it onto spindle head 131, in which case screw 20 serves only a securing function during operation of the hand-held power tool.

In contrast, the screw 22 described in March is absolutely necessary to securely attach chuck 12 to the spindle head. A secure connection is not ensured without the use of screw 22, via which axial forces are created.

Otherwise, in conjunction with a screw of this type, the Applicants refer the Examiner to the specification at page 1, second paragraph, where it is discussed that it is basically known to screw a cap screw into a central threaded bore in the spindle head until the screw head abuts a support shoulder of chuck, thereby ensuring that the screwed-in head cannot be rotated in the reverse direction.

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,

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